

*mind body spirit*

# **Mind-Body Medicine**

*Calming the Mind, Healing the Body  
and Renewing the Spirit*

Steven M. Schwartz, MD  
Director Predoctoral Education, Dept of Family Medicine  
Georgetown University School of Medicine

KERRY'S RESCUE SQUAD • TEAM AMERICA'S FUNNY WAR

# Newsweek

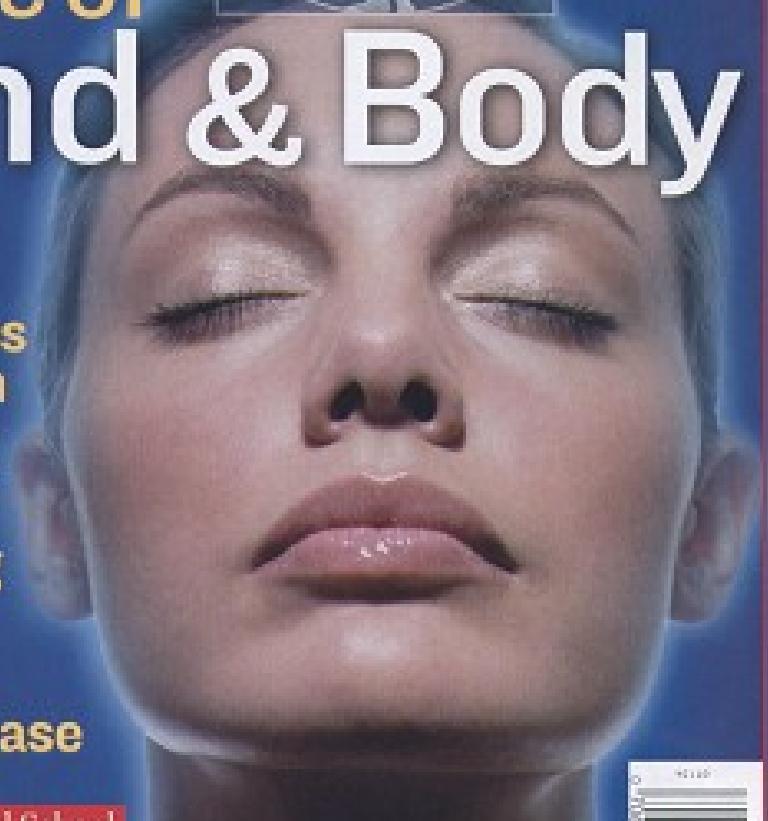
September 23, 2002



## The New Science of Mind & Body

HEALTH  
FOR LIFE

- Forgiveness And Health
- Stress and Infertility
- Rethinking Hypnosis
- Clues to Heart Disease



With Howard Bloomfield, Esq.



# *Relaxation Techniques*

- 36% of all Americans Using CAM
  - Relaxation techniques #2 (14% )
  - Used for a potpourri of conditions
- What the heck are they?
- Do they work?
- For what?

Tindle HA, Eisenberg, et al, "Trends in use of complementary and alternative medicine by US adults: 1997-2002." Alternative Therapies in Health & Medicine. 11(1):42-9, 2005 Jan

# *Objectives*

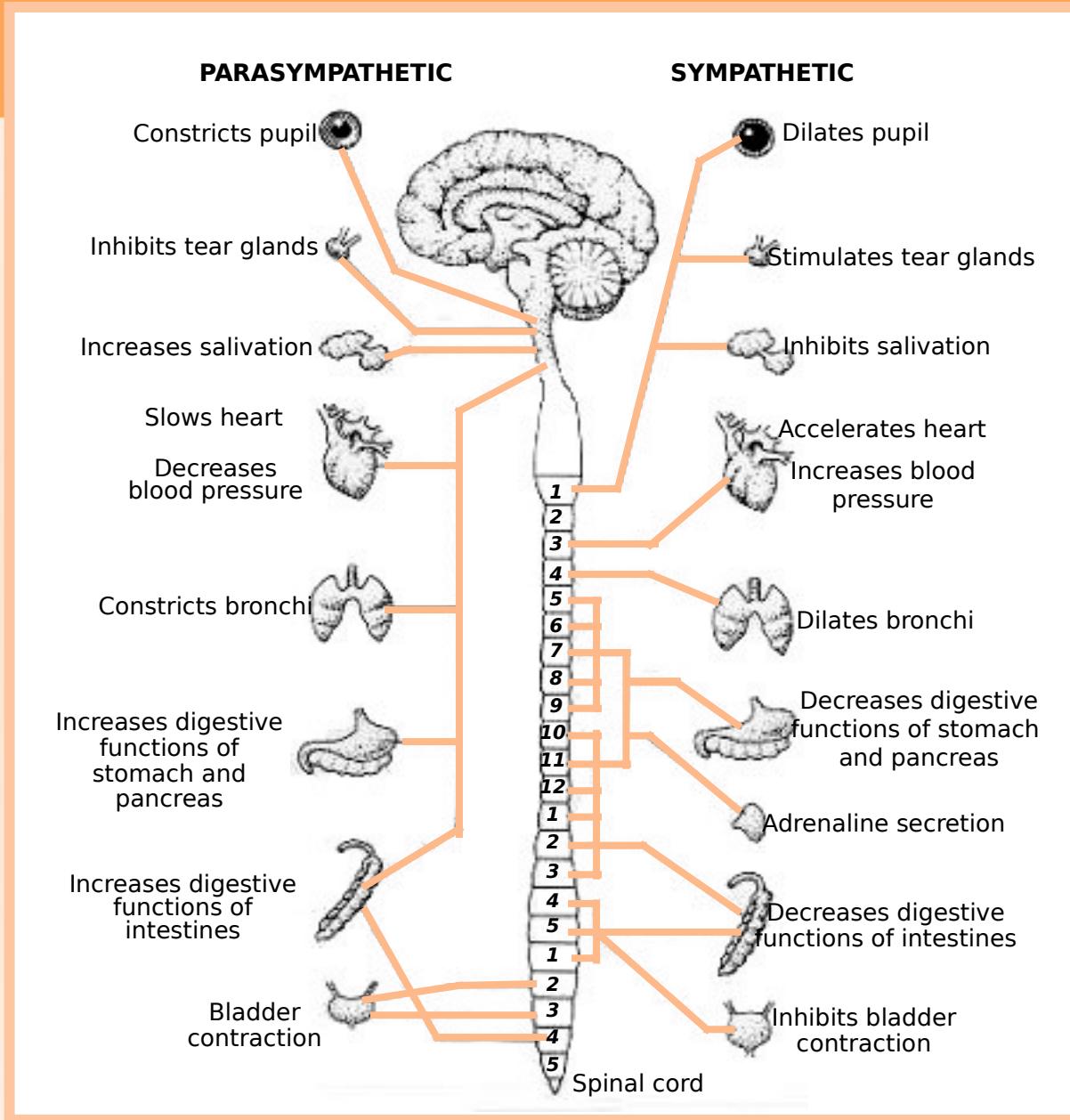
## **Audience members will be able to:**

- Identify common aspects of the “fight or flight” response and the “relaxation response”
- Identify various relaxation technique modalities
- List at least 3 evidence based indications for relaxation techniques
- Experience a brief guided relaxation using thermal biofeedback.

# *What is Mind-Body Medicine?*

- Mind-Body Medicine asserts that:
  - there is a connection and interaction between the mind and the body. Each has a powerful effect on the other.
  - the physical, emotional, mental, social and spiritual aspects of our lives directly effect our health and well-being.

# Autonomic Nervous System



# *Fight or Flight*

## **Sympathetic arousal**

- “Fight flight” system Walter Bradford Cannon, 1926
  - Arousal and preparation
  - Increase heart rate, BP,
  - Rapid shallow respiration
  - Decrease intestinal activity
  - Cold and sweaty
  - Dilated pupil
  - Blood flow redistributed

# *Psychoneuroimmunology*

- Neuro-endocrine interaction long understood
- Anatomic/synaptic connections of CNS to immune system
- Cells of the immune system can produce and are effected by neurohormones and neuropeptides
- Classic endocrine glands and neurons can produce and are effected by cytokines
- The function of neuropeptides, neurohormones and cytokines vary according to their location of action
- Psychologic factors can concievably affect all aspects of neuroendocrine and immune function
- Autoregulation and balance

# *Effects of Chronic Stress*

## **Chronic Sympathetic Arousal**

- Self-regulation breaks down
- Excessive CV, electrocortical, and hormonal activation
- Immune suppression
  - Adrenal hypertrophy
  - Thymus and lymph atrophy
  - Increase gastric acid “stress ulcers”
- May lead to chronic conditions
  - Headache, Chronic pain conditions
  - High blood pressure
  - Functional GI problems
  - Exacerbates other physical problems

# *The Relaxation Response*

- Coined by Herbert Benson, MD, Harvard
- Studied Buddhist Monks practicing TM
- Marked ability to affect metabolism (Vo2Max)
- EEG changes
- Heart Rate, BP changes
- Neurological, endocrine and immune changes

# *Relaxation techniques*

## **What are they?**

- “a group of behavioral therapeutic approaches that differ widely in their philosophical bases as well as in their methodologies and techniques. Their primary objective is the achievement of nondirected relaxation, rather than direct achievement of a specific therapeutic goal.”

# *Relaxation Techniques*

## **Hypnotic/deep methods**

- Autogenic training(Self-hypnosis)
- Meditation
- Progressive muscle relaxation (PMR)
- Guided imagery
- Biofeedback

## **Brief Methods**

- Self-control relaxation
- Paced respiration
- Deep breathing

## **Other Methods**

- Group Support
- Drawing/Journaling
- Yoga
- Tai Chi/Chi Gong
- Prayer
- Jogging/swimming
- Knitting

# *Meditation*

- Focusing on one specific thing intentionally and non-judgmentally in the present moment
- When we are able to focus on just what is happening in the present moment, our minds cannot be anxious, worried or distressed about other issues.

# *What is Meditation*

- Meditation is about ***being*** rather than ***doing***
  - it enables us to slow down and bring self-awareness and insight into our daily lives - so that we can more easily make decisions that are appropriate for us

# *Imagery*

- Using the imagination to help the body and the mind heal, stay strong and perform as needed
- Communication between the mind and the body
- Most effective when all senses are incorporated (vision, hearing, smell, taste, & touch)

# *Biofeedback*

- Obtaining information from the body by using a biofeedback device (machine, thermistor, or biodot)
- Biofeedback machines can measure, brain waves, muscle tension, and skin temperature
- Information is used to monitor and gain control over autonomic body functions

# *Types of Biofeedback*

- **Electromyogram (EMG)**
  - uses electrodes or other types of sensors to measure muscle tension
- **Temperature Biofeedback**
  - sensors are attached to your fingers or feet to measure skin temperature

# *Thermal Biofeedback*

## **Measures skin surface temperatures**

- Biofeedback device
- Changes in hand/foot temperature are a reflection of blood flow (a measure of the stress response)
- The amount of temperature change depends on the stressor and how you react to stress

### **Basic rule:**

- Warmer hands/feet indicate relaxation
- While colder hands/feet reflect tension



# *Combining Autogenic Training and Biofeedback*

**Thermal biofeedback and autogenic training combine two self-regulation techniques**

- Autogenic phrases promote changes in the body
- Biofeedback device gives us a window into the body to see the changes
- Quickens the learning process

**Biofeedback makes apparent the changes triggered by AT**

# *Adverse Effects/Contraindications*

- Risk for strong emotional response, “Ab reaction”
- Active psychosis
- CV status, Physical limitations for active meditations
- Remember, if people become anxious during a particular exercise they can always open their eyes or stop participating

# *Relaxation Techniques*

## **Hypnotic/deep methods**

- Autogenic training(Self-hypnosis)
- Meditation
- Progressive muscle relaxation (PMR)
- Guided imagery
- Biofeedback

## **Brief Methods**

- Self-control relaxation
- Paced respiration
- Deep breathing

## **Other Methods**

- Group Support
- Drawing/Journaling
- Yoga
- Tai Chi/Chi Gong
- Prayer
- Jogging/swimming
- Knitting

# *Evidence of Effectiveness*

- Chronic pain (A)
- Pain with procedures(A)
- Migraine (A) BF>RT
- Tension HA (B)
- Irritable bowel syndrome/Functional GI problems (C) RT, Imagery
- Insomnia (B) Med>PMR
- Reynaud's Phenomenon (BF)
- Stress reduction
- Anxiety/depressive symptoms (B)
- HTN modest benefit not in JNC VII
- Incontinence(BF with Behavior)

# *Evidence for Effectiveness*

Numerous small studies have shown benefits in:

- Decrease in blood pressure with fewer or no medications over three-years
- Chronic pain: less severe of pain, more activity, less anxiety, less depression, less anger, and fewer managed care visits.
- Sleep-onset insomnia 75% “cured” 25% improved
- Psychosomatic patients reduced their number of visits by 50 percent
- Premenstrual syndrome (PMS) 57 percent decrease in severity
- Anxiety, mild/moderate depression: less anxious, depressed, angry, and hostile
- Painful procedures: less anxiety, pain and need for medication
- Open-heart surgery: fewer postoperative arrhythmias and less anxiety
- Migraine and cluster headache: fewer and less severe headaches
- High school sophomores increased their self-esteem
- Working people: reduced symptoms of depression, anxiety, and hostility.
- Working people had fewer medical symptoms, fewer illness days, improved performance, and lower blood pressure.

# *Additional Benefits*

- Modulation of mood
- Stimulation of immune responses
- Empowers the patient
- Discovering meaning/insight into illness
- Enhancing self-awareness
- (BF) Increases confidence in relaxation skills
- Increased energy levels
- Feelings of being nurtured, accepted, understood, empowered and supported
- Improved confidence and concentration
- Increased peace of mind, optimism and self-worth

# *Summary*

- Mind-Body Medicine can be used to complement and enhance conventional western medical treatment.

# *Experience Relaxation*

- Excellent technique to manage stress
- Quickly and effectively return body to a balanced state
- Easy to learn... a set of structured phrases
- No cultural or religious overtones

# *Autogenic Training*

## *The Six Phrases*

**Content and sequence are based on clinical observations of psychophysiological changes in the body**

1. My arms are heavy (heaviness, muscular relaxation)
2. My arms are warm (warmth, vascular dilation)
3. My heartbeat is calm and strong (heart function regulation)
4. My breathing is calm and relaxed (regulation of breathing)
5. My abdomen radiates warmth (regulation of the visceral organs)
6. My forehead is pleasantly cool (regulation of brain activity)

**Advanced autogenic state**

- Intentional phrases/psychological
- Organ specific phrases/physiological

# *Thermal biofeedback - Biodot*

- Amber 89.6F
- Yellow 90.6F
- Green 91.6F
- Turquoise 92.6F
- Blue 93.6F
- Violet 94.6F